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Review Article

Major problems and key issues in Maternal Health in Nepal

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Abstract
This paper highlights some of the challenges facing maternal health in Nepal and to suggest possible solutions for improvements. Key literature from across the globe is reviewed and discussed in a Nepalese context. Maternal mortality remains one of the biggest public health problems in Nepal. Lack of access to basic maternal healthcare, difficult geographical terrain, poorly developed transportation and communication systems, poverty, illiteracy, women's low status in the society, political conflict, shortage of health care professional and under utilization of currently available services are major challenges to improving maternal health in Nepal. In order to effect real improvements in maternal health, attention needs to be focused both on biomedical and social interventions. Improving health facilities, mother's nutrition, women's position in the society such as freedom of movement, providing education to female children, integrating Traditional Birth Attendants into local health services can play a vital role in the improvement of mothers' health.

Maternal mortality is one of the key indicators of the status of reproductive health care service delivery and utilization, but it also can be an indicator of women's status in a society. Maternal mortality, currently an issue of concern on the international health agenda, remains one of the most important public health problems in developing countries. In September 2000 the members of the United Nations adopted the Millennium Declaration and set eight millennium development goals, one of which is reducing maternal mortality[1]. More than 529,000 women die every year from pregnancy-related causes, and more than 99% of these deaths take place in the developing countries[2].

Globally, approximately 80% of maternal deaths are due to direct obstetric complications: primarily haemorrhage, sepsis, complications of abortion, pre-eclampsia and eclampsia, and prolonged/obstructed labour. The remaining 20% of maternal deaths are indirect, i.e. they are due to existing medical conditions, aggravated by pregnancy or delivery[2,3].

The aim of this paper is to review the available literature to identify fundamental issues in maternal health. This paper highlights some challenges and suggests ways forward in the improvement of maternal health in Nepal. Published and unpublished studies reported between 1994 and 2005 and other reports related to Nepal were searched. The sources searched to identify studies included electronic databases such as Medline, CINAHL, Science Direct, and Scopus. WHO webpages and the Ministry of Health of Nepal web pages were searched and hand searching of relevant reference lists was also adopted.

Challenges

The Ministry of Health in Nepal has developed the second long-term Health Plan 1997-2017 aiming to reduce the maternal mortality rate to 250 per 100,000 live births by 2017. Nepal is also committed to the Millennium Development Goal of reducing maternal mortality ratio by three quarters between 1990 and 2015[4]. Maternal health is a national health priority and improving maternal health is a major focus of the current national development plan in Nepal[5]. However, there are several challenges to achieving this goal.

High Maternal Morbidity and Mortality

The maternal mortality rate in Nepal is 539 per 100,000 live births, which is one of the highest in the world[6]. The Ministry of Health in Nepal has estimated that nearly 4,500 women die every year from pregnancy-related complications, mostly due to lack of skilled birth attendants and the absence of emergency services and equipment in rural health centres in Nepal[7].

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The majority (67%) of maternal deaths occur at home, 11% on the way to a health facility and 11% in health facilities, 90% of which occur in a rural setting. Postpartum haemorrhage is the leading cause of maternal death accounting for 46%, obstructed labour for 16% and eclampsia for 14% of all maternal death. Peripheral sepsis is another important cause of maternal death accounting for 12%[8]. Most deliveries in Nepal occur at home and only 9% at health facilities[9]. The Demographic Health Survey revealed 48% of pregnant women received any antenatal care and only 14.3% of them had four or more antenatal check ups, which are recommended by National Maternity Care Guideline produced by the Ministry of Health, Nepal[9].

Under utilization of the maternal health services

In addition to the above challenges, under utilisation of health services is the big challenge for Nepal. There are number of factors which contribute to under utilisation of health services. Evidence from different studies shows that poor physical access to health facilities due to geographical accessibility, limited health infrastructure, political instability, lack of resources, women's low status in the society, poor communication system in rural Nepal and shortage of trained health professional are important barriers to health service utilisation[10,11,12].

Political instability

Political instability and the deteriorating situation arising from political conflict remain a threat to health care delivery in Nepal. Attacks have damaged many health facilities, and staff is often reluctant or unable to travel in rural areas. Many women are reported to have died during childbirth because they could not reach emergency obstetric care due to strike, due to restricted movement of vehicles[11]. Because of lack of security and political conflict, health care professionals do not want to work in rural areas and this is one of the factors, which encourages medical doctors and qualified nurses to migrate abroad.

Limited health infrastructure

There are limited health facilities and extreme pressure in Out-Patient Departments (OPD) in Nepal. Overcrowding in hospitals OPD makes it impossible to have privacy; lack of adequate training of health care providers to maintain confidentiality and privacy are issues that deter women from seeking care[13]. Poorly equipped government health facilities are discouraging women from using services which are easily accessible in urban areas of Nepal.

Lack of resources and shortage of trained health professional

Serious shortages of skilled attendants are common throughout developing countries. Nepal continues to experience imbalance in the health workforces due to shortage of personnel and geographical maldistribution[14]. Shortages are especially severe in rural areas, since health professionals are often concentrated in cities[15]. Increased health care worker emigration is contributing to a shortage of trained health professional in Nepal.

Women's position in the society and women's vulnerability

Nepalese women have low status in society. Women's lower status in the family, where decisions regarding mobility and expenditures for health care are in the hands of men or older females, may prevent them from seeking care for their own health problems[16]. According to Shakya and McMurray, Nepalese husbands may not be willing to send their wives for medical checks when only male doctors are available[17]. Likewise, other family members such as mothers-in-law may not want to send their daughters-in-law to the health facilities. Limited mobility and education opportunity for women have a major impact on their exposure to new ideas, development of inter-personal skills, initiative and confidence in interacting with larger world[18]. Furthermore, lack of freedom on movement prohibits women to access information.

The majority of women in Nepal have to ask the head of house (husband or father in law) to spend money, even for health care services. Women's lack of decision-making power within the family and community, their lack of education and economic power, restrict their ability to seek and receive care during pregnancy and childbirth[19]. According to traditional Nepalese cultural norms, ''women have to cook and serve food to all other household members before eating themselves, and then eat only whatever is left even during pregnancy'' (Resource Centre for Primary Heath Care, 1994 as cited in[17]. Moreover, Nepalese women also have poor knowledge about diet and nutrition. Therefore, nutritional anaemia is one of the major contributors to the high maternal mortality rate in Nepal. Frequent pregnancies and inadequate nourishment of women during pregnancy place them at high risk during delivery[12].

Affordability

About 37.7% of the population live below the national poverty line in Nepal[20]. Cost for essential services and supplies prevent many women from receiving skilled care during pregnancy, childbirth,

and the postpartum period in Bangladesh[21]. According to Griffith and Stephenson, the cost (including direct fees) needed to pay for the services and transport to reach to the health facilities and indirect costs in the form of the loss of the women's household duties being a barrier to services utilisation in India[22]. Similarly, costs including direct fees as well as the cost of transportation, drugs and supplies, multiple demands on women's time are major obstacles in the maternal health service utilisation in Nepal[10].

Communication and transportation

There are very poor roads and a lack of bridges over major rivers in rural areas in Nepal. It could be very difficult for pregnant women to travel in such conditions. Poor women in rural areas have to walk more than an hour to reach the nearest health facility. Poor road infrastructure and lack of public transport make access difficult especially when there are complications. As a result, poor women seek health care from less trained providers who are more accessible or they never seek any care. According to Mumtaz and Salway in Pakistan, women and their families avoid travelling due to fear of abortion during pregnancy in such roads[18]. Similar constraints act upon Nepalese women and their families. Furthermore, there is still no telephone service in most rural areas of Nepal. No one can be called if complications arise.

The ways forward

There are no quick-fixes to overcome the above challenges. Evidence from several countries suggested that several factors need to be considered to improve maternal health in developing countries like Nepal.

Improving health service utilisation

It is recognised that every pregnancy is at risk of maternal death, which cannot be predicted. Therefore, contact with health care providers during pregnancy, identification of pregnancy complications and timely referral to an appropriate institution is essential to prevent maternal death. Evidence from previous review shows that increasing access to services and ability to seek emergency care when needed and recognize danger signs is essential to all women in developing countries[2].

Evidences show that Antenatal Care (ANC) helps to improve maternal health and reduce maternal death. Antenatal care is an important determinant of safe delivery[23, 24, 25]. Although certain obstetric emergencies cannot be predicted through antenatal screening, women at least can be educated to recognise symptoms leading to potentially serious conditions and to take immediate action[24]; this is one of the strategies for reducing maternal mortality[25]. ANC is an opportunity to inform women about the danger signs and symptoms for which assistance should be sought from a health care provider without delay. One of the most important functions of antenatal care is to provide health information and services that can significantly improve the health of women and their infants[26]. The effective treatment of obstetric complications, by means of essential and emergency obstetric care, are vital. Maternal health services, such as ANC, skilled assistance during delivery and postnatal care, along with adequately equipped health institutions play a major role in the reduction of maternal mortality and morbidity[12].

Providing education and knowledge

Literature suggests that improving women's educational status is the best strategy to improve the maternal health as well as women's status in the society. Studies in Nepal show that mother's education is the best predictor and most important factor that influence ANC visits in Nepal[10, 12]. Educated women are more likely to realize the benefits of using maternal health services. Matsumura and Gubhaju emphasized that education increase the chances of women using maternal health care, if the service is available even in the rural areas[12]. Women's illiteracy rates in Nepal (65%) are nearly double that of men[20] and should be the focus of female education. Eevidence from Pakistan show that removing barriers in limited and restricted mobility among girls and providing an opportunity for education have positive impact on maternal health outcomes[18]. Mobility and education opportunity can play an important role on their exposure to new ideas, development and confidence in interacting with the larger world. Similarly, involving women in decision-making processes within the family can help them to use the health services. According to Sharma making education free and compulsory to girls will significantly and consistently improve women's ANC, postnatal care and childbirth survival rates[13]. She also recommended that the information and education message regarding women's health needs should reach husbands and families, as they are the main decision makers[13].

Government should train more doctors and nurses to fill the shortfall and ensure that they do not all emigrate. Health care providers need to be trained to listen to women's needs, desires and fears, and to discuss highly personal or culture-specific aspects of pregnancy and delivery. Maintain the privacy and

confidentiality are equally important to improve the maternal health care utilization.

It is important to increase awareness among the general public as well as among primary level health care workers that every delivery is a potential high risk delivery, best conducted in a well equipped centre since 15 percent of the deliveries may have life threatening conditions. Education about the danger signs during pregnancy and delivery among the women is very important[27].

Involving men in maternal health matter

Men involvement is needed in order to improve maternal well-being of women[28]. Male involvement in maternal health has recently been promoted as a promising new strategy for maternal health[29]. Since men are the primary decision maker of most Nepalese families, men's involvement in maternal health matter could promote a better relationship between men and women in household in women empowerment. Mullay and colleague state that involving husband/partner and encouraging couple joint decision making in maternal health may provide and important strategy in achieving women's empowerment, which ultimately help to reduce the maternal morbidity and mortality[30].

Making services affordable

Making the services affordable for all poor people is essential to improve the maternal health. Developing national policies that ensure the removal of financial barriers like fees for essential services and supplies that prevent many women from receiving skilled care during pregnancy, childbirth, and the postpartum period, should be the Government priority. HMG Nepal's recent initiative of maternity allowance of 1,000 to 1,500 rupees to be given to pregnant woman for institutional delivery and 300 rupees for a skilled attendant who conducts delivery is the positive action. This initiative should be advertised widely so that every pregnant woman is encouraged to have safe delivery and improved the service utilization.

Improving communication and transportation system

Improved transportation system can save women life when they need emergency obstetric services. The Three-Phases-of-Delay model identifies barriers to (or the potential for delay) in women accessing Emergency Obstetric[31].

The three phases are:

Phase 1: deciding to seek care on the part of the individual, the family, or both;

Phase 2: reaching an adequate health care facility;

Phase 3: receiving adequate treatment once at an appropriate health facility.

Generally the poorest women have least knowledge of major obstetric complications or are least likely to seek medical care for any complications (Phase 1 delay), and they are also more likely to delay when they did seek care (Phase 2). Perceived poor quality of health services, difficulties in transportation and cost have been shown to deter women from seeking care and reaching a facility. Thus the poorest women are at greatest disadvantage in the first two phases of delay. Poor women are also probably disadvantaged when they actually get to a facility (Phase 3) in that they may have to wait longer before receiving adequate treatment once at an appropriate health facility. Provision of free ambulances could be important intervention, so that high-risk deliveries could be referred to hospitals or well-equipped obstetric and gynaecology centres without wasting time and also considering that the family may be too poor to afford the ambulance. Because of geographical inaccessibility, Shakya and McMurray recommended mobile clinic/camp could be useful to improve maternal health in Nepal[17]. In addition to this, improving communication systems such as telephone facilities in remote areas play a vital role in the improvement of maternal health. If complications arise, qualified health personnel can be called.

Training of Traditional Birth Attendant (TBA)

In many places in rural Nepal, the services from skilled professional healthcare providers are not available and TBAs are only the source of maternal health care. Differences in casts and cultures between providers of services and users can sometimes be a barrier in the utilisation of the maternal health services in Nepal. TBAs can provide culturally appropriate services in the community setting, offering a first-line link with the formal healthcare system, and distribution of nutritional supplements.

In recent years, the importance of TBA training is controversial. A WHO recent report highlighted that TBA training strategies are not cost effective and have failed to improve maternal health in many countries[2]. However, CEDPA's TBA training evaluation in Nepal showed that the trained TBA has a positive impact on maternal health[32]. Studies by Rodgers and colleagues in Bangladesh recommend that the TBA training alone is not sufficient for improving health outcomes, especially in terms of maternal mortality and morbidity[33]. We recognised that training and integration of TBAs is not part of Nepal's Safe Motherhood approach, however in the

absence of skilled attendance at birth in rural areas, this issues can not be ignored.

Conclusions

Limited resources and administrative capacity tied with strong underlying needs for health services create serious challenges to the Government of Nepal. Programmes aimed at reducing maternal mortality should be based on the principle that every pregnant woman is at risk for life-threatening complications. An important intervention for Safe Motherhood is to make available of health workers with midwifery skills at every birth including those in rural settings. Availability of quality emergency obstetric care and referral system are equally important. Reducing the maternal mortality rate cannot be achieved only by focusing on the availability of basic and comprehensive obstetric care in primary and secondary health facilities. Proper management of underpaid, poorly motivated and poorly organised health workforce, improved health infrastructure are basic requirement in the improvement of maternal health. Similarly, comprehensive health promotion through appropriate training of healthcare workers would be beneficial to improving maternal health in Nepal.

Interventions should address not only the medical problems but also need to deal with wider social problems. Interventions should focus to improve the status of women in society including increasing female literacy and empowerment to tackle the maternal health problems.

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